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RE: KapStone Longview Mill NPDES Permit Renewal; Individual NPDES Permit No. WA0000078

Columbia Riverkeeper ("Riverkeeper") submits these comments on the Washington Department of Ecology's ("Ecology") proposed National Pollutant Discharge Elimination System Permit No. WA0000078 (hereinafter, the "Draft Permit") for KapStone Kraft Paper Corporation's Longview Fiber Mill and Box Plant (hereinafter, "KapStone" or "the mill").

Riverkeeper's works to protect and restore the Columbia River and all life associated with it, from its headwaters to the Pacific Ocean. Riverkeeper represents over 8,000 members and supporters in Oregon and Washington and regularly comments on decisions impacting water quality in the Columbia River, including NPDES permit renewals for pulp mills. Riverkeeper's members boat, swim, and catch and eat fish from the Columbia River nearby and downstream from KapStone's mill in Longview, Washington.

KapStone is a significant industrial point source, discharging roughly 30 million gallons of combined process, stormwater, and sanitary wastewater every day into the lower Columbia River. Conventional, toxic, and stormwater pollutants from the mill have the potential to harm human and environmental health. Because this permit may govern the mill's discharges for the next decade, Ecology's decisions will have a significant and lasting effect on the water quality of the Columbia River.

I. KapStone's toxic discharges may harm Columbia River fish, and people who eat them.

Though KapStone no longer uses chlorine to bleach wood pulp, data collected and submitted by KapStone indicate that the mill still discharges 2,3,7,8-tetrachlorodibenzo-p-dioxin ("dioxin"), as well as bis(2-ethylhexyl) phthalate, dibutylphthlate, dichlorobromomethane, diethylphthalate, phenols, toluene, chloroform, and toxic metals, into the Columbia River. *See* Fact Sheet, pp.14–17. These pollutants include some of the most toxic substances ever created,

and Ecology should implement effluent limits to protect the Columbia River's Endangered Species Act-listed salmon and steelhead, and people who eat locally-caught fish.

1. Ecology should explain why KapStone discharges dioxin and other toxics, and the permit should require water quality sampling when the mill is likely to be discharging dioxin.

KapStone intermittently detected dioxin and other toxic chemicals in its wastewater, despite no longer using chlorine to bleach pulp. *See* Fact Sheet, pp.14–17. Specifically, KapStone detected dioxin in its wastewater in one out of eight samples. *Id.* at 17. Ecology's Fact Sheet does not discuss the source of dioxin in KapStone's wastewater or why KapStone only detected dioxin in one out of eight samples.

Dioxin and other toxic chemicals probably enter the mill's process wastewater when KapStone purchases and uses bleached market pulp and/or recycled products. KapStone apparently purchases and uses bleached market pulp to make certain products in response to specific customer orders. *See* Fact Sheet, p.8. If the amount of bleached market pulp the mill uses varies in response to customer orders and bleached market pulp is the source of dioxin in KapStone's discharge, this could explain why KapStone detected dioxin in the mill's wastewater only at certain times.

If the levels of dioxin and other toxics in KapStone's effluent fluctuate based on the type of off-site raw material KapStone uses, Ecology should require KapStone to monitor water quality when toxics are most likely to be present in the mill's wastewater.

2. KapStone must use "all known, available, and reasonable treatment" technologies to reduce toxic pollution, and Ecology must set AKART-based effluent limits to ensure such treatment.

Every NPDES permittee must employ "[a]ll known, available, and reasonable methods of prevention, control, and treatment" to decrease pollution. WAC 173-216-110(1)(a); WAC 173-216-020(1). This requirement, commonly called "AKART," is the legal standard for technology-based effluent limits in NPDES permits. Unless water quality concerns dictate stricter limits, the effluent limits in KapStone's permit must reflect AKART.

It does not appear that Ecology has considered, let alone set, AKART-based effluent limits on toxic pollutants in KapStone's discharge. Ecology's Fact Sheet repeatedly asserts that the mill's treatment system constitutes AKART. *See* Fact Sheet, pp.25, 33. But with respect to controlling and treating toxic pollutants like dioxin, that conclusion is utterly unsupported. **The Fact Sheet's "Technology-Based Effluent Limits" section discusses conventional pollutants**

like pH, BOD5, and TSS but never mentions technology based effluent limits for toxic pollutants. *See* Fact Sheet, pp.24–27. Nor does the Fact Sheet attempt to explain why the mill's treatment system—which is designed to reduce TSS and BOD5—constitutes AKART for the toxic chemicals present in KapStone's effluent. Ultimately, the Draft Permit contains no effluent limits for toxic pollutants. *See* Draft Permit, p.7. Ecology should determine AKART and set AKART-based limits on the various toxic pollutants in KapStone's discharge, *see* WAC 173-216-110(1)(a), or explain why Ecology appears to ignore this basic permitting requirement with respect to KapStone's toxic discharges.

3. Ecology's RPAs for toxic pollutants are flawed because Ecology should not have used mixing zones when calculating the mill's potential to exceed water quality standards.

Ecology incorrectly concluded that KapStone's toxic discharges will not violate numeric water quality criteria in the Columbia River. *See, e.g.*, Fact Sheet, p.43. That conclusion, described in the Reasonable Potential Analyses ("RPA") in Appendix D of the Fact Sheet, is premised on Ecology using the edge of a mixing zone as the point of compliance in the RPAs. As explained below, Ecology could not legally authorize a mixing zone for some or all of the toxic pollutants in KapStone's discharge. Ecology must therefore re-calculate its RPAs for toxics using the end of the pipe as the point of compliance.

First, Ecology may not authorize a mixing zone for *any* of the toxic pollutants. The application of AKART is a pre-requisite for authorizing a mixing zone. WAC 173-201A-400(2) ("A discharger shall be required to fully apply AKART prior to being authorized a mixing zone."); *see also* Fact Sheet, p.33. As explained in the preceding section, however, the Draft Permit does not impose AKART-based effluent limits on KapStone's toxic discharges. Ecology could not authorize a mixing zone for toxic pollutants. Therefore, Ecology may not rely on a hypothetical mixing zone to conclude that those pollutants will not violate Washington's numeric water quality standards.

Second, because Ecology may not legally authorize mixing zones for persistent bioaccumulative toxics ("PBTs") like dioxin, Ecology may not rely on a mixing zone when calculating the potential for PBTs to violate Washington's numeric water quality standards.[1] The EPA and the Washington Pollution Control Hearings Board ("PCHB") have both come to the common-sense conclusion that mixing zones for PBTs generally do not assure the attainment of water quality standards and the protection of beneficial uses. As EPA recognized fifteen years ago, when EPA banned mixing zones for PBTs in the Great Lakes:

[1] For the same reasons, if the re-calculated RPAs determine that concentrations of a PBT in KapStone's discharge violates a numeric water quality standard at the end of the pipe, Ecology may not authorize a mixing zone for that PBT.

> "[I]t is the mass of [PBTs] that poses a problem, not just the concentration. Because **dioxins**, mercury, polychlorinated biphenyls (PCBs) and other [PBTs] degrade over long periods of time or do not degrade at all, their . . . bioaccumulation . . . in fish and other aquatic organisms can occur at levels that significantly exceed safe levels for consumption by wildlife and humans."

65 Fed. Reg. at 67640–41 (November 13, 2000) (emphasis added). **Last month, the PCHB explained that mixing zones for PBTs should "rarely, if ever, be granted"** and held that granting a mixing zone for a PBT in an already-contaminated waterway did not comply with WAC 173-201A-400(4). *Puget Soundkeeper Alliance v. Ecology and Seattle Iron and Metals Corp.*, PCHB No. 13-137, pp.46–47 (July 23, 2015). Ecology could not legally authorize a mixing zone for a PBT like dioxin, so Ecology should not have used a mixing zone to calculate the RPAs for such pollutants.

4. Ecology should explain why bioaccumulation of persistent toxics like dioxin will not violate Washington's narrative water quality standards.

The Draft Permit and Fact Sheet do not adequately analyze factors like biomagnification, additive toxicity, and multiple exposure pathways that impact how toxic pollutants actually affect aquatic organisms. For example, Ecology states that "[t]oxic pollutants . . . are near-field pollutants; their adverse effects diminish rapidly with mixing in the receiving water." This is not true with respect to persistent toxic pollutants like dioxins, which can accumulate to dangerous levels in fish and other organisms even when ambient levels of these chemicals in the water are below thresholds that Ecology deems safe.

Ecology should revise the Draft Permit and Fact Sheet to explain and ensure that toxic pollution from the mill will not violate Washington's narrative water quality standards, which protect beneficial uses of the Columbia River like salmon and steelhead survival and human fish consumption. WAC 173-201A-510(1); WAC 173-201A-240. Specifically, the Fact Sheet should explain how bioaccumulation and biomagnification of extremely toxic pollutants such as dioxins will impact aquatic organisms. Washington's narrative water quality standard for toxic pollution requires that toxic substances in a discharge not have the potential, either singularly or cumulatively, to harm sensitive aquatic life like salmon and steelhead, or adversely impact characteristic water uses like fish consumption.[2] Because the Fact Sheet does not discuss factors like biomagnification, additive toxicity, and multiple toxic exposure pathways regarding dioxin and its congeners, the Draft Permit may in fact be authorizing toxic discharges that violate the narrative water quality standards, in violation of 40 C.F.R. 122.44(d)(1)(i) and WAC 173-201A-510(1).

[2] Ecology, *Water Quality Program Permit Writer's Manual*, p.VI-4 (2011) (citing WAC 173-201A-240).

II. Kapstone's thermal pollution exacerbates the Columbia's temperature problems.

Summertime temperatures in the Columbia River at Longview are too often hot to support salmon and steelhead. KapStone exacerbates this problem. Ecology determined that salmon and steelhead in the Columbia River need water cooler than 17.5 °C for rearing and migration. WAC 173-201A-200; Table 602.[3] According to the Fact Sheet, summertime temperatures in the Columbia River at Longview can reach 20.6 °C for sustained periods of time—higher than is safe for salmon and steelhead. Fact Sheet, p.13. KapStone discharges water as hot as 39.4 °C—about 30 million gallons of it each day. *Id.* at 12. The heat in KapStone's effluent makes a bad situation worse, harming the Columbia's ability to support salmon and steelhead.

Because the human influences like dams and global warming cause the Columbia River's summertime temperature exceedances, Ecology may not allow Kapstone's discharge to increase the temperature of the Columbia River. Permitted discharges may not contribute to violations of water quality standards. WAC 173-201A-510(1). But as the preceding paragraph explained, that is precisely what the KapStone's discharge does. Ecology attempts to avoid this basic rule of NPDES permitting by relying on WAC 173-201A-200(1)(c)(i) and explaining that the mill's discharge will not increase water temperatures by more than .3 °C at the edge of the chronic mixing zone.[4] Fact Sheet, p.44. Ecology's approach is illegal. WAC 173-201A-200(1)(c)(i)'s '.3 °C increase' exception only applies when the receiving water is violating the applicable temperature standard "due to natural conditions." Nowhere in the Draft Permit or Fact Sheet does Ecology determine, or even assert, that the summertime temperatures in the Columbia are 'due to natural conditions.' In fact, the EPA determined that the Columbia's summertime temperature exceedances are caused by humans, primarily by hydroelectric dams.[5] Accordingly, WAC 173-201A-200(1)(c)(i) does not apply and Ecology may not permit KapStone's discharge to contribute to the Columbia's temperature problems.

Ecology must set effluent temperature limits for the mill at or below the applicable water quality criteria of 17.5°C for salmon and steelhead rearing and migration. *See* WAC 173-201A-200. Ecology must also require monitoring and reporting of the temperature of Outfall 001's effluent to ensure compliance with the temperature limit.

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[3] The Fact Sheet at Page 37 appears to incorrectly state the applicable temperature criteria (for salmon spawning, rearing, and migration) as 20 °C. Even if this were true, KapStone's discharges would contribute to a violation of the WQS.

[4] Even if Ecology could legally allow an increase of .3 °C, the point of compliance would be the end of the pipe, not the edge of the chronic mixing zone, as Ecology asserts on Page 44 of the Fact Sheet. Application of AKART to a discharge is a pre-requisite to the authorization of a mixing zone. WAC 173-201A-400(2). The Draft Permit and Fact Sheet contain no evidence that KapStone has implemented AKART to reduce temperature.

[5] *See* EPA, *Draft Total Maximum Daily Load for Temperature in the Mainstem Columbia and Snake Rivers* (2003).

III. Ecology must regulate KapStone's industrial stormwater.

KapStone's 365-acre industrial facility has the potential to generate significant quantities of contaminated stormwater. "Stormwater runoff from the built environment remains one of the great challenges of water pollution control, as this source of contamination is a principal contributor to water quality impairment of waterbodies nationwide."[6] Accordingly, Riverkeeper invests significant organizational resources in reducing stormwater pollution to the Columbia River and its tributaries. Ecology's proposes requiring KapStone to prepare a Stormwater Pollution Prevention Plan ("SWPPP") as described in Washington's 2015 Industrial Stormwater General Permit (ISGP). But unless Ecology adopts the measures described below, KapStone is unlikely to meaningfully reduce its stormwater pollution.

Ecology must require KapStone to sample its industrial stormwater before combining it with process wastewater. KapStone's current arrangement, wherein all stormwater goes directly to the wastewater treatment plant,[7] apparently prevents KapStone from monitoring its industrial stormwater. Fact Sheet, p.58. Faced with similar concerns, EPA stated that "[t]he comingling of process water and stormwater should be avoided."[8] The 2015 ISGP also prohibits comingling stormwater and process wastewater. 2015 ISGP, p.16. KapStone's comingling of stormwater and process wastewater prevents anyone one from understanding how contaminated the mill's stormwater is. And going forward, we will have no idea whether KapStone's stormwater management is improving. **Ecology must require KapStone to monitor the concentrations of contaminants in the mill's industrial stormwater *before* combining that stormwater with the mill's process wastewater.**

Ecology should subject KapStone to the core requirements of the ISGP, not just require KapStone to write a SWPPP. The core requirements of the ISGP are (1) creation and *implementation* of an industry- and facility-specific SWPPP, and (2) tiered corrective actions in response to benchmark exceedances. KapStone's Draft Permit does not even approximate these requirements. First, the permit compels KapStone to write a SWPPP but, as best Riverkeeper can determine, does not require KapStone to implement the stormwater pollution controls described in that SWPPP. Second, the Draft Permit contains no mechanism—like corrective action responses to benchmark exceedances—compelling KapStone to improve its stormwater controls if the actions described in the SWPPP do not bring stormwater pollution levels below the ISGP's benchmarks. Even Ecology's NPDES permit for the nearby Weyerhaeuser mill made

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[6] National Research Council, *Urban Stormwater Management in the United States* (Oct. 15, 2008) (online at: http://www.epa.gov/npdes/pubs/nrc_stormwaterreport.pdf.).

[7] While Riverkeeper does not necessarily oppose KapStone running its stormwater through the mill's wastewater treatment plant on the way to Outfall 001, the wastewater treatment plant was not designed to remove toxic metals like zinc and copper that often appear in industrial stormwater.

[8] EPA, *Comments on Fact Sheet and Draft NPDES Permit for Weyerhaeuser Longview Mill* (Feb. 14, 2014).

implementation of the SWPPP and corrective actions in response to benchmark exceedances enforceable permit requirements.

Fortunately, Ecology can easily and fairly rectify these deficiencies in the Draft Permit. KapStone's permit should incorporate by reference Special Conditions S3, S4, S5, S6, S7, S8, S9, and S10 of the 2015 ISGP. Fully incorporating these substantive, sampling, and reporting requirements of the ISGP into KapStone's permit will give Ecology and the public the means to understand how much stormwater contamination KapStone produces, and the means to ensure that KapStone lives up to the same standards as all other Washington industries that generate and discharge industrial stormwater.

IV. KapStone must sample its discharge for prohibited solid wastes.

KapStone appears to discharge plastic debris directly into the Columbia River though Outfall 001. According to public testimony by mill employees on August 24, 2015, plastics enter the mill's waste stream when the mill uses old corrugated cardboard ("OCC"), which often contains plastic debris. Testimony and photographs submitted to Ecology by John Williams and "Employee Number 1" at the public hearing demonstrate that the mill's wastewater treatment system allows a significant amount of plastic debris to reach the Columbia.

Riverkeeper supports the Draft Permit's ban on solid waste, including plastic debris, in KapStone's effluent. *See* Draft Permit, p. 23 ("The Permittee must handle and dispose of all solid waste material in such a manner as to prevent its entry into state ground or surface water."). However, KapStone's current permit contains precisely the same language. The ban on solid waste discharge, and the Draft Permit's other requirements for handling solid waste, are clearly not sufficient to keep KapStone from dumping plastics into the Columbia River. To ensure that KapStone stops dumping plastic trash into the Columbia, Ecology should require KapStone to regularly monitor its effluent in a manner reasonably calculated to detect plastic debris. KapStone should monitor for solid waste when plastics are likely to be present in the effluent; during or directly after the mill uses large quantities of OCC.

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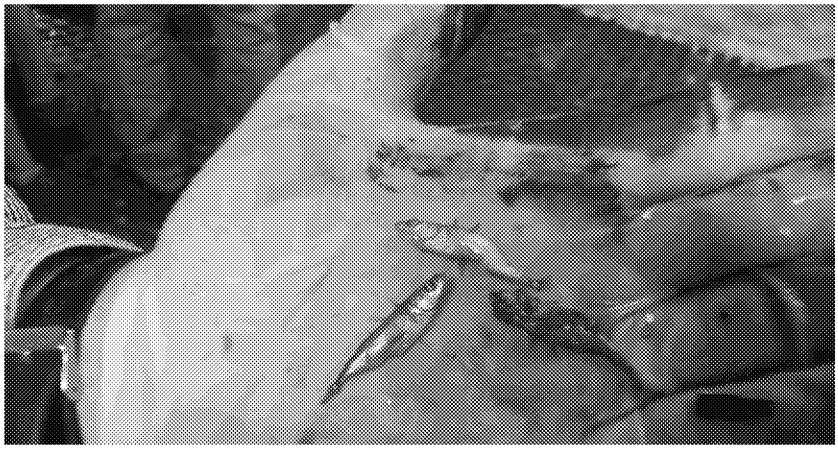
V. KapStone's water intake kills salmon and eulachon.

KapStone's cooling and process water intake entrains and kills small fish, including salmon smolts. Below, a picture taken inside the mill shows native three-spine stickleback found in the mill's water system after becoming entrained and dying. These three-spine stickleback are



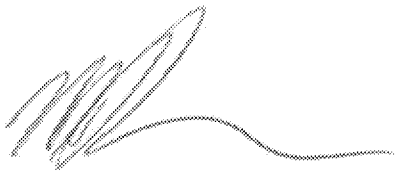
roughly the same size and shape as native ocean-type chinook salmon smolts that rear and migrate in the lower Columbia and Cowlitz rivers near KapStone's water intake. In fact, public testimony given by "Employee Number 1" at Ecology's August 24, 2015, public hearing confirmed that smolts have been found entrained in the mill's water intake. Under Section 9 of the Endangered Species Act, Ecology may not authorize, and KapStone may not carry out, activities that kill, injure, or harm ESA-listed, take-protected species like salmon. 16 U.S.C. § 1538(a)(1)(B); 50 C.F.R. § 222.102; *see also Loggerhead Turtle v. County Council of Volusia County, Fla.*, 148 F.3d 1231, 1247–55 (11th Cir. 1998); *see also Strahan v. Coxe*, 127 F.3d 155, 158, 163 (1st Cir. 1997). Based on the documented entrainment of smolts and other small fish in KapStone's water intake structure, the structure entrains and kills salmon and eulachon that are protected by the Endangered Species Act.

The best way for Ecology to protect itself and KapStone from Endangered Species Act liability is to require KapStone to swiftly implement one of the water intake structure designs described in EPA's new regulations. Importantly, EPA's intake structure designs were reviewed in a Biological Opinion and Incidental Take Statement written to satisfy the Endangered Species Act. Giving KapStone four and a half years to report back on which federal water intake regulations the mill might be subject to (*see* Draft Permit, p.60) will cause the continued entrainment and death of protected salmon in violation of Section 9 of the Endangered Species Act.

Conclusion

Riverkeeper requests that the final permit ensures that the mill does not contribute to the ongoing temperature problems in the Columbia River and that the mill discharges the absolute minimum amount of dioxins, toxics, and plastics. We look forward to Ecology's responses and hope that the renewed permit will help create a clean and safe Columbia River.

Sincerely,



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